

## *Lyra PPS 1000*

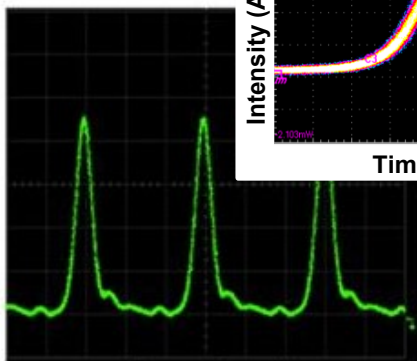
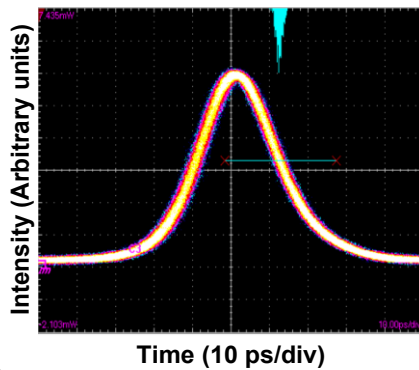
### Optical picosecond pulse source



The Lyra PPS 1000 is a picosecond optical pulse generator which is based on our patented gain switching technology. It offers excellent stability, tunable repetition rate and near transform limited, low jitter, picosecond pulses. A wide range of central wavelengths are available.

#### Features

- Stable and robust pulse source
- Low jitter (<1 ps)
- Near transform limited pulses
- Tunable repetition rate
- Polarization maintaining fibre coupled output
- Simple, push-button operation
- RF drive module included



Time (33 ps/div)

#### Typical Specifications

Wavelength	1530 – 1565 nm others on request*
Wavelength Tuning	+/- 1 nm
Repetition Rate	5 – 14 GHz / others on request
Pulse Width	20 ps
Jitter	<1 ps (RMS)
Pulse Energy	1 pJ
Average Power	3 mW
Peak Power	50 mW

\*Other specifications might change

#### Applications

- Test and measurement
- Spectroscopy
- Seed pulse generation
- Medical imaging
- Fluorescence spectroscopy
- Pump-probe experiments
- Optical time domain reflectometry
- Return to zero transmission systems
- Optical time division multiplexing systems

Optical Specifications	Min.	Typ.	Max.	Unit	Notes
Centre Wavelength	1530	1550	1565	nm	Other wavelengths 500-1100 nm and 1200-2000 nm available on request. Other specifications might change.
Centre Wavelength Tuning Range	- 1	-	+ 1	nm	On request, wavelength can be tuned within the specified range around the selected centre wavelength.
Repetition Rate	5	10	14	GHz	The free spectral range can be tuned over a range by an external voltage. Others available on request.
Pulse Width		20		ps	FWHM.
Pulse Jitter			1	ps	
Average Output Power	1	3	6	mW	Repetition rate dependant. Typical value characterized for a 10 GHz repetition rate.
Pulse Peak Power	30	50	65	mW	Repetition rate dependant. Typical value characterized for a 10 GHz repetition rate.
Pulse Energy		1		pJ	
Relative Intensity Noise	-140	-130	-120	dBc/Hz	Uniform distribution over frequency span, without mode partition noise.
Laser Optical Linewidth	100	300	500	kHz	
<b>Physical Specifications</b>					
Dimensions		190 x 110 x 31		mm	
Power Consumption			10	W	
AC Voltage	100		240	V	
DC Supply Voltage	10	12	13		AC-DC power supply is provided.
DC Supply Noise (1 kHz – 200 kHz)		20	60	mVpp	
Operating Temperature	+5		+35	°C	
Storage Temperature	-20		+70	°C	
Humidity, Non-Condensing			90	%RH	
RF Input Connector		SMA			Female.
Optical Output		FC/APC PM			
<b>Other Specifications</b>					
Turn On Time			7	s	Ready-to-work-time, from the moment of DC power application.
Cold Start Settling Time (System Warm-up)	5	15	30	min	System warm-up time to reach optimum performance.
Rise Time of Optical Signal	30	50	100	ms	Delay between pressing the Enable button and the light source emission.